WHAT IS CLAMED IS:

1. An image processing apparatus that performs designated processes on a normal orthogonally transformed image, said image processing apparatus comprising:

a noise adding unit that adds designated noise to said image that has undergone said normal orthogonal transformation,

wherein said noise is noise obtained by performing the same transformation as said normal orthogonal transformation on a designated dither matrix.

2. The image processing apparatus in accordance with claim 1, wherein the dither matrix is a Bayer matrix.

3. The image processing apparatus in accordance with claim 1, wherein said normal orthogonal transformation is discrete cosine transformation.

4. The image processing apparatus in accordance with claim 1, wherein said image that has undergone said normal orthogonal transformation is a JPEG image.

5. The image processing apparatus in accordance with claim 1 further comprising:

a reverse transformation unit that performs a reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said noise-added image.

6. The image processing apparatus in accordance with claim 5 further comprising:

a binarization unit that binarizes said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value.

7. The image processing apparatus in accordance with claim 6, wherein said designated threshold value is a certain value.

8. The image processing apparatus in accordance with claim 6 further comprising:

an output unit that outputs said binarized image by display or printing.

9. An image processing apparatus that performs designated processes on a normal orthogonally transformed image, said image processing apparatus comprising:

a noise adding unit that adds designated noise to said image that has undergone said normal orthogonal transformation;

a reverse transformation unit that performs a reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said noise-added image; and

a binarization unit that binarizes said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value.

10. The image processing apparatus in accordance with claim 9 further comprising:

an output unit that outputs said binarized image by display or printing.

11. An image processing apparatus that performs designated processing on an image for which high frequency components have been removed, said image processing apparatus comprising:

a noise adding unit that adds designated noise to the image with said high frequency components removed.

12. The image processing apparatus in accordance with claim 11, wherein said noise is noise obtained by performing normal orthogonal transformation on the designated dither matrix.

13. An image processing system that transfers images from a sending device to a receiving device,

wherein said sending device comprises:

a noise adding unit that adds designated noise to an image which has undergone normal orthogonal transformation; and

a sending unit that sends said image to which said noise has been added via a communication path,

wherein said receiving device comprises:

a receiving unit for receiving said sent image; and

a reverse transformation unit for performing reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said received image.

14. The image processing system in accordance with claim 13, wherein said noise is noise obtained by performing the same transformation as said normal orthogonal transformation on a designated dither matrix.

15. The image processing system in accordance with claim 13, wherein said receiving device further comprises a binarization unit that binarizes

said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value.

16. The image processing system in accordance with claim 15, wherein said receiving device further comprises an output unit that outputs said binarized image by display or printing.

17. A memory device that is connected to an image processing apparatus that performs designated processes on an image on which normal orthogonal transformation is performed,

wherein said image processing apparatus comprises a noise adding unit that adds noise obtained by performing the same transformation as said normal orthogonal transformation on a designated dither matrix to said image that has undergone said normal orthogonal transformation, said memory device comprising:

a first memory unit that stores said image that has undergone said normal orthogonal transformation; and

a second memory unit that stores said dither matrix or stores noise obtained by performing the same transformation as said normal orthogonal transformation on said dither matrix.

18. The memory device in accordance with claim 17, wherein said dither matrix is a Bayer matrix.

19. An image processing method that performs designated processing on a normal orthogonally transformed image, said image processing method comprising the step of:

(a) adding designated noise to said image that has undergone said normal orthogonal transformation,

wherein said noise is noise obtained by performing the same transformation as said normal orthogonal transformation on a designated dither matrix

20. The image processing method in accordance with claim 19 further comprising the step of:

(b) performing reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said image with said noise added.

21. The image processing method in accordance with claim 20 further comprising the step of:

(c) binarizing said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value.

22. The image processing method in accordance with claim 21 further comprising the step of:

(d) outputting said binarized image by display or printing.

23. An image processing method that performs designated processing on a normal orthogonally transformed image, said image processing method comprising the steps of:

(a) adding designated noise to said image that has undergone said normal orthogonal transformation;

(b) performing reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said image with said noise added; and

(c) binarizing said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value.

24. The image processing method in accordance with claim 23 further comprising the step of:

(d) outputting said binarized image by display or printing.

25. A computer program product that causes a computer to perform designated processes on a normal orthogonally transformed image, said computer program product comprising:

a first program code that causes said computer to add noise obtained by performing the same transformation as said normal orthogonal transformation on a designated dither matrix to said image that has undergone said normal orthogonal transformation; and

a computer readable medium, in which said first program code is stored.

26. A computer program product in accordance with claim 25 further comprising:

a second program code that causes said computer to perform a reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said noise-added image, said second code being stored in said computer readable medium.

27. A computer program product in accordance with claim 26 further comprising:

a third program code that causes said computer to binarize said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value, said third program being stored in said computer readable medium.

28. A computer program product that causes a computer to perform designated processes on a normal orthogonally transformed image, said computer program product comprising:

a first program code that causes said computer to add designated noise to said image that has undergone said normal orthogonal transformation;

a second program code that causes said computer to perform a reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said noise-added image;

a third program code that causes said computer to binarize said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value; and

a computer readable medium, in which said first through third program codes are stored.

29. A computer readable medium that stores an image which is obtained by adding designated noise to a normal orthogonally transformed image.

30. A data signal embodied in a carrier, said data signal representing a computer program that causes a computer to perform designated processes on a normal orthogonally transformed image, said data signal comprising:

a program code that causes said computer to add noise obtained by performing the same transformation as said normal orthogonal transformation on a designated dither matrix to said image that has undergone said normal orthogonal transformation.

31. A data signal embodied in a carrier, said data signal representing a computer program that causes a computer to perform designated processes on a normal orthogonally transformed image, said data signal comprising:

a first program code that causes said computer to add designated noise to said image that has undergone said normal orthogonal transformation;

a second program code that causes said computer to perform a reverse normal orthogonal transformation, which is a reverse transformation of said normal orthogonal transformation, on said noise-added image; and

a third program code that causes said computer to binarize said image, which has undergone said reverse normal orthogonal transformation, using a designated threshold value.